

What is claimed is:

1. A imaging apparatus having a plurality of image pickup means, comprising:

5 coupling means for optically coupling optical images obtained from said plurality of image pickup means;

timing control means for controlling image pickup timing of said image pickup means; and

overall control means capable of bi-directional  
10 communication with at least one of said coupling means and said timing control means, for performing an overall control of said imaging apparatus;

said coupling means having at least said timing control means mounted therein.

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2. A imaging apparatus as defined in claim 1, wherein said coupling means is attachable to and detachable from each of said image pickup means, and attachable to and detachable from said overall control means, and each of said image  
20 pickup means is attachable to and detachable from said overall control means.

3. A imaging apparatus as defined in claim 1, wherein said coupling means has, mounted therein, storage means for  
25 storing imaging data which are optical images obtained from

said image pickup means, or imaging data optically coupling  
said optical images.

4. A imaging apparatus as defined in claim 1, further  
5 comprising dividing means for deflecting light or dispersing  
light with a plurality of wavelengths to divide the light into  
a plurality of components, said image pickup means  
acquiring said components of the light divided by said split  
means as optical images, respectively.

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5. A imaging apparatus as defined in claim 4, wherein said  
dividing means comprises a beam split prism for dispersing  
light with a plurality of wavelengths.

15 6. A imaging apparatus as defined in claim 4, wherein said  
dividing means comprises a half mirror for deflecting light.

7. A imaging apparatus as defined in claim 1, further  
comprising delay means for shifting said timing.

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8. A imaging apparatus as defined in claim 1, wherein said  
overall control means is capable of bi-directional communi-  
cation with at least one of said coupling means and said  
timing control means through cables, said cables being  
25 connected to said overall control means and at least one of

said coupling means and said timing control means.

9. A imaging apparatus as defined in claim 1, wherein said overall control means is capable of bi-directional communication with at least one of said coupling means and said timing control means through a function to transmit and receive electromagnetic wave, said function being provided for each of said overall control means and said coupling means or said timing control means.

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10. A coupling apparatus for use with a imaging apparatus having timing control means for controlling image pickup timing of a plurality of image pickup means, and overall control means, wherein:

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said coupling apparatus forms part of said imaging apparatus;

said coupling apparatus having at least said timing control means mounted therein, and being arranged for optically coupling optical images obtained from said plurality of

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image pickup means; and

said overall control means performing an overall control of said imaging apparatus, and being capable of bi-directional communication with at least one of said coupling apparatus and said timing control means.

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11. A coupling apparatus as defined in claim 10, wherein

said coupling apparatus is attachable to and detachable from each of said image pickup means, and attachable to and detachable from said overall control means.

5    12.    A coupling apparatus as defined in claim 10,  
         comprising storage means mounted therein for storing  
         imaging data optically coupling said optical images.

10    13.    A coupling apparatus as defined in claim 10,  
         comprising dividing means mounted therein for deflecting  
         light or dispersing light with a plurality of wavelengths to  
         divide the light into a plurality of components, said image  
         pickup means acquiring said components of the light divided  
         by said split means as optical images, respectively.

15    14.    A coupling apparatus as defined in claim 13, wherein  
         said dividing means comprises a beam split prism for  
         dispersing light with a plurality of wavelengths.

20    15.    A coupling apparatus as defined in claim 13, wherein  
         said dividing means comprises a half mirror for deflecting  
         light.

25    16.    A coupling apparatus as defined in claim 10, further  
         comprising delay means for shifting said timing.

17. A coupling apparatus as defined in claim 10, wherein  
said overall control means is capable of bi-directional  
communication with at least one of said coupling means and  
5 said timing control means through cables, said cables being  
connected to said overall control means and at least one of  
said coupling means and said timing control means.

18. A coupling apparatus as defined in claim 10, wherein  
10 said overall control means is capable of bi-directional  
communication with at least one of said coupling means and  
said timing control means through a function to transmit  
and receive electromagnetic wave, said function being  
provided for each of said overall control means and said  
15 coupling means or said timing control means.